CLAIMS

1.   Peptide interacting with anti-apoptotic proteins of the Bcl-2 family, characterised by the sequence SEQ. ID. NO.1 : Asp-Thr-Arg-Arg-Ser-Met-Val-Phe-Ala-Arg-His-Leu-Arg-Glu-Val-Gly-Asp-Glu-Phe-Arg-Ser-Arg .

5   2.   Peptide according to claim 1 interacting with the anti-apoptotic proteins Bcl-2, Bcl-XL and/or Bcl-W.

3.   Peptide according to claim 1 or 2, characterised in that it corresponds to a fragment or point mutant of the peptide described in SEQ. ID. NO.1.

4.   Nucleic acid sequence coding for a peptide according to claim 1, characterised by
10   the sequence SEQ. ID. NO.2 :
5'-GATACCCGTCGCAGCATGGTGTTTGCCAGGCACCTGCGGGAGGTGGGAGA
CGAGTTCAGGAGCAGA -3'.

5.   Nucleic acid sequences deduced according to the genetic code from the amino acid sequence according to claim 1 or 2.

15   6.   Nucleic acid sequences deduced according to the genetic code from the amino acid sequence according to claim 3.

7.   Recombinant vector, characterised in that it comprises a nucleic acid sequence according to one of claims 4 to 6.

8.   Recombinant vector according to claim 7, characterised in that the vector is a
20   plasmid comprising the sequences necessary for expression of the peptide in a host cell.

9.   Host cell, characterised in that it has been transformed by the recombinant vector according to one of claims 7 or 8.

10.   Method of identifying compounds capable of modifying the interaction between a peptide according to one of claims 1, 2 or 3 and an anti-apoptotic protein of the Bcl-2 family, characterised in that it comprises the following steps:

a) preparation of a peptide according to one of claims 1, 2 or 3 labelled with a fluorescent label;

b) incubation with the compound under test;

c) addition of the fusion protein comprising the anti-apoptotic protein of the Bcl-2 family;

d) measurement of the fluorescence polarisation.

11.   Method of identifying compounds capable of inhibiting the interaction between a peptide according to one of claims 1, 2 or 3 and an anti-apoptotic protein of the Bcl-2 family, characterised in that it comprises the following steps:

a) preparation of a peptide according to one of claims 1 or 2 labelled with a fluorescent label;

b) incubation with or without the compound under test;

c) addition of the fusion protein comprising the anti-apoptotic protein of the Bcl-2 family;

d) measurement of the fluorescence polarisation;

e) selection of the compounds for which the increase in fluorescence polarisation observed with the compound under test is significantly less than that observed without the compound under test.

12.   Method of identifying compounds capable of enhancing the interaction between a peptide according to one of claims 1, 2 or 3 and an anti-apoptotic protein of the Bcl-2 family, characterised in that it comprises the following steps:

a) preparation of a peptide according to one of claims 1 or 2 labelled with a fluorescent label;

b) incubation with or without the compound under test;

c) addition of the fusion protein comprising the anti-apoptotic protein of the Bcl-2 family;

d) measurement of the fluorescence polarisation;

e) selection of the compounds for which the increase in fluorescence polarisation observed with the compound under test is significantly greater than that observed without the compound under test.

13. Method according to one of claims 10 to 12, wherein the anti-apoptotic protein is Bcl-2.

14. Method according to one of claims 10 to 12, wherein the anti-apoptotic protein is Bcl-XL.

15. Method according to one of claims 10 to 12, wherein the anti-apoptotic protein is Bcl-W.

16. Method according to one of claims 10 to 12, wherein the peptide used is characterised by the sequence SEQ. ID. NO.1.

17. Method according to one of claims 10 to 12, wherein the fluorescence label used is fluorescein.

18. Use of a peptide according to one of claims 1, 2 or 3 in the identification, according to the method of one of claims 10 to 17, of apoptosis-modifying compounds.

19. Use of a peptide according to one of claims 1, 2 or 3 in the identification, according to the method of one of claims 10 to 17, of compounds that are useful in the treatment of pathologies involving deregulation of apoptosis.

20.   Use of a peptide according to one of claims 1, 2 or 3 in the identification, according to the method of one of claims 10 to 17, of compounds that are useful in the treatment of autoimmune diseases, certain neurological disorders and cancers.